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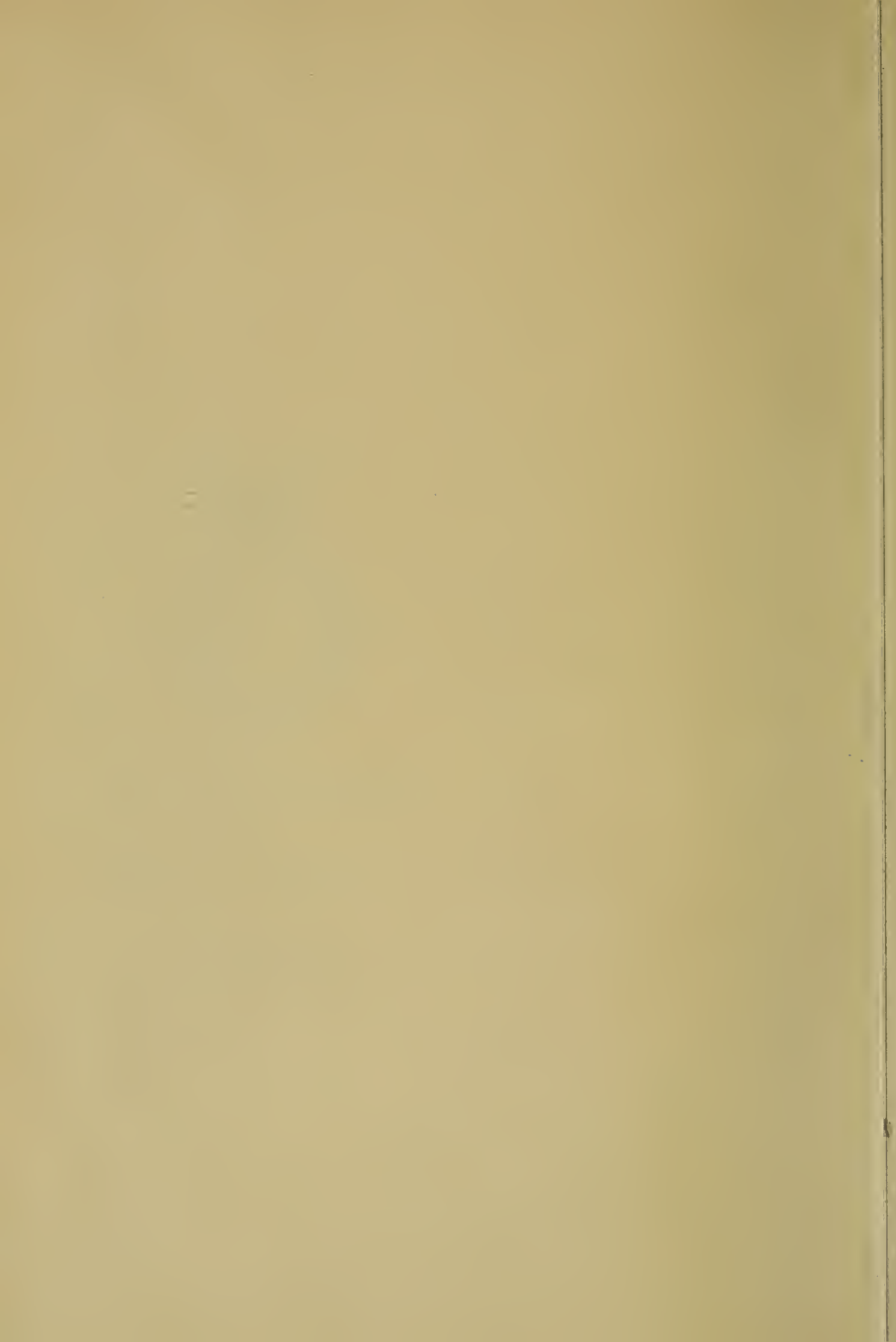
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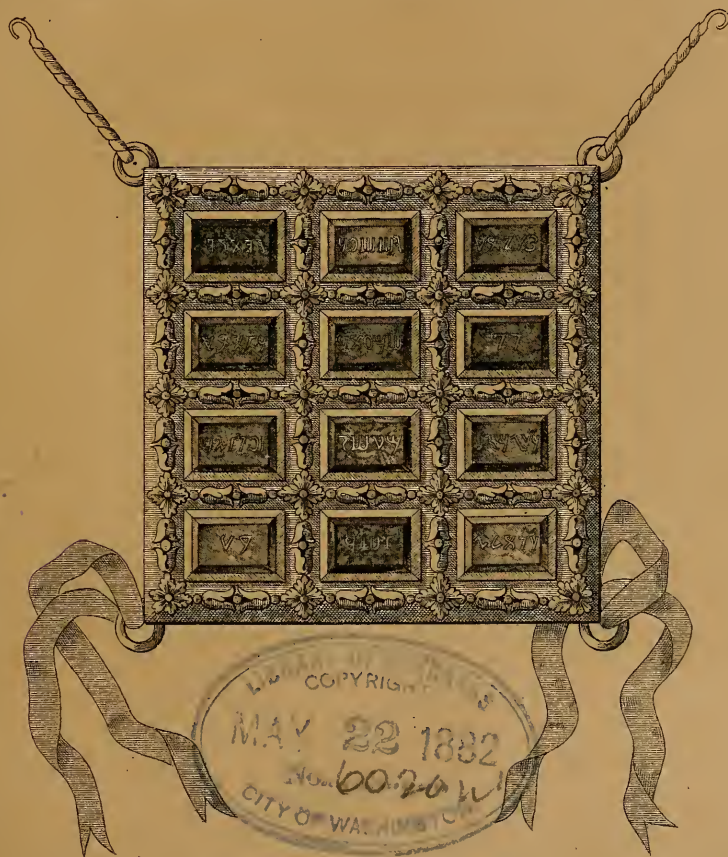
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SOMETHING ABOUT NEGLECTED GEMS.



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INTRODUCTION.

A STRONG tendency to individuality has of late years manifested itself throughout the great Art universe in the renunciation of old conventionalities, and in a determined stride in the direction of free taste.

A complete revolution has overturned the old province of æsthetics, and forced a decided change in every department of Art productions.

To realize this new condition in the material world, it is only necessary to consider the present style of house furniture and decoration, and contrast it with that of less than a quarter of a century ago.

We are a people given to extremes, and eager enthusiasm for novelty is but too liable to overstep the bounds of moderation.

Still, this same tendency to impatience under restraint, and to audacious independence, if directed in the right channel, would in time develop a national taste

both daring and original. The fashions of the day tend to the encouragement of decided personality in dress, and the question naturally suggests itself: If in apparel, why not in articles of adornment?

This leads to the consideration of the scope afforded us for originality in the selection of jewels for personal use and enjoyment, in the stones that are here introduced.

There is a large class of gems of rare beauty, color and brilliancy, among which there are many instances of stones that it is almost impossible to duplicate.

Strange to say, these gems have until recently been entirely neglected, overlooked perhaps through ignorance of their very existence, certainly through ignorance of their beauty.

Why should not jewels, possessing such attractive properties and unlimited variety, be more sought after by the public?

A more general knowledge of their beauty would undoubtedly insure their popularity, and consequently increase the demand. It is only because they are so little known that few specimens are at present found in the market.

As far as scarcity is concerned, many of these stones are even rarer than the diamond or sapphire—the green garnet and the blue and pink tourmalines may be mentioned as instances.

Others might also be cited, but they are left to appear under their own special classification, without further introduction.

SOMETHING ABOUT NEGLECTED GEMS.

THE ZIRCON.

The names *Hyacinth* and *Jacinth* are applied indiscriminately to the red variety of this family ; whereas the yellow, gray, brown and green specimens are termed *Jargoons*.

It is difficult in many instances to distinguish at a glance the members of this family from some of the other precious stones ; but classification can always be determined by the specific gravity, which is greater in the zircon than in any other gem.

The ancients showed a marked predilection for the Hyacinth on account of a pleasing superstition that it would induce sleep, and procure for the wearer wisdom, honor and riches. Evil spirits were supposed to

have a particular aversion to the stone, and to flee the presence of the possessor.

The Hyacinth is particularly well adapted to *intaglios*, the grain being fine, and the stone showing distinctly all the lines of the engraver. Even stones that have a dull center are susceptible of great beauty, as the design covers the dull portion, while the edges remain full of fire and brilliancy.

Gems of various kinds are placed in the hands of the engraver, who forces even the hard sapphire to yield to the merciless diamond point of his tool, and receive the image, now of an ancient warrior now of a mythological deity.

THE CHRYSOBERYL.

This is the name of the crystal most resembling the sapphire in hardness, but differing entirely from it in color.

The several varieties of the chrysoberyl family are so totally unlike in appearance that one would never recognize as sisters the *Oriental Catseye* and the *Alexandrite* of the Ural Mountains.

The latter is a most mysterious and fascinating gem, changing its whole aspect when taken from daylight into the presence of a lighted candle or gas-jet. By day the stone is green, with a slight tinge of olive, resembling somewhat a tourmaline, though of greater brilliancy ; but by artificial light the green entirely disappears, and in its place a reddish luster, bordering on purple, pervades the whole jewel.

This was the favorite gem of Alexander II., Emperor of Russia ; hence the derivation of the name.

The *Catseye* is almost too well-known to be described, but it may be mentioned that the value does not depend upon any one of the many colors in which it occurs—yellow, gray, brown or green—but upon the beauty and distinctness of the stripe which traverses its surface.

For many years the true catseye was supposed by jewelers to be a sapphire, and was named *sapphire catseye* in contradistinction to the *quartz catseye* of the Hartz Mountains, and to the *crocidolites* of the Orange River in Africa ; but the real *chrysoberyl catseye* can be readily distinguished from these last by its extreme hardness and translucency.

Old superstitions attribute to this stone, as to the hyacinth, various forms of good-luck, asserting that the eye of Fortune was bound to keep ever a constant vigil over the life and undertakings of the possessor.

THE TOURMALINE.

Superstition might with equal reason have attached itself to the *Tourmaline* on account of its wonderful magnetic property.

This stone, when placed in hot ashes, will alternately attract and repel them; and if in this heated condition it be embedded in cold ashes, it will continue to affect them in the same way, the electricity being generated by difference of temperature.

The tourmaline, when first brought to Europe by the Dutch, was named *Aschentrekker* on this very account.

Saxe Holme~~s~~ makes use of this electric property as the foundation of a short story entitled, "My Tourmaline;" but he has greatly exaggerated the magnetic power of the stone.

Although found in various quarters of the globe, the

tourmaline rarely exists in a clear and perfect state, suitable for the purposes of the jeweler.

The ordinary stone, ranging in color from pale apple-green to dark olive, and even black, is frequently met with in Maine and in several other of the United States; but the Brazilian *Indicolite*, of a rich blue tint, and the red, yellow, brown and gray varieties, the production of the Ceylon mines, are of extreme rarity. Fine red tourmalines are of especially uncommon occurrence, and are as beautiful as costly rubies.

When grouped together tourmalines produce most gorgeous effects and brilliant harmony of color, rivaling in splendor the time-worn emeralds, sapphires and diamonds.

They rarely require a diamond setting to develop their charm, but appear to the best advantage when grouped with the other members of the same family. They are chiefly composed of alumina or crystalized clay (the material of the sapphire), with silica, and the color varies according to the presence of foreign minerals. The green tourmaline is shown to contain a proportion of potash and protoxide of iron; whereas

the red has none, but, instead, small quantities of lime, soda and manganese.

Among the natural crystals, which are usually long and narrow, an occasional parti-colored stone may be seen, combining red and green, and sometimes yellow, red and brown. One specimen in the British Museum shows five distinct varieties of color.

THE OPAL.

The precious or noble Opal is one of the most exquisite gems in existence ; all the colors of the most beautiful jewels being here united in one. When held between the eye and the light it appears of a pale, milky-reddish blue, but when seen by reflected light it displays all the colors of the rainbow, in flakes, flashes or sparks. When the colors are in small flakes, it is termed, by jewelers, "harlequin" opal, on account of the resemblance to the motley tints of the harlequin's dress.

When fine these are much prized, but some persons prefer stones having the colored fire in large flashes.

THE SAPPHIRE.

Few persons are aware, even those who possess sapphires, that the stone is found in any other color than blue ; but many different tints are familiar to the mineralogist—white, yellow, green, pink, red, blue, black, violet and opalescent.

These are all known as the *corundum* jewels, being crystalized clay, as the diamond is crystalized carbon. But the latter stone, though produced by nature in many colors, always retains its name, whereas every variety of sapphire has a different appellation.

The blue is the well-known sapphire, the red is the ruby, and the others are named after the stones they most resemble, as oriental amethyst, oriental emerald, oriental topaz, etc., but they are all true sapphires.

Many persons improperly, and through ignorance, apply the term *oriental* at random to choice specimens of *every* stone, whereas the name belongs exclusively to varieties of the sapphire family.

It might here be mentioned that the mines where these stones are found, produce also the most beautiful

specimens of the ruby, and are the monopoly of the King of Burmah.

They are rigorously guarded and worked by the natives, no European being allowed to approach them. Fine stones can be removed from the country only by smuggling, as the order is imperative to retain all for the king's treasury.

When a particularly large ruby is discovered, it is the custom to send out a procession of grandees with soldiers and elephants to escort it with honor to the palace.

One of the titles of the King of Burmah is Lord of the Rubies.

A strange variety of corundum is the *star sapphire*, which has the appearance of a six-pointed star when held in the sun-light. The lines crossing in the center suggest a catseye striped in three directions. The color of these stones is usually gray, though pink and blue specimens are occasionally met with.

Quite as rare and unfamiliar to the public are the many varieties of fancy colored sapphires, before alluded to. These stones should generally be associated

with diamonds, as their delicate tints, more especially in yellow and pink, are thereby thrown into greater prominence.

THE GARNET.

Under this head the ordinary red garnet at once suggests itself, and few of the uninitiated know that the green *Uwarowite*, the yellow *Essonite*, the purple *Almandine*, and the brown *Colophonite* are identically the same stone, differing only in color.

Garnets are found in large quantities in as many as one hundred localities in the United States ; but fine, pure crystals in any other color than red are extremely rare. The green variety is particularly beautiful, being far richer in tone than the emerald, and possessing great brilliancy. All the fancy garnets are, as a rule, exceedingly lustrous, unusual care being taken in the cutting to produce the best possible effects.

The ancients confounded the garnet with the ruby, and attributed to it the same happy influence with which the latter was supposed to be invested.

In former times red stones of every kind were termed

Carbuncles, but the term should be limited to the red garnet when cut without facets, smooth on top, and flat or concave beneath.

THE BERYL.

Beryl is the scientific name for the *emerald* and *aqua-marine*. The stones are identical, with the exception of the color ; the *emerald*, which is well-known, being green, and the *aqua-marine* of a pale blue or light sea-green tint, as the name implies.

THE PERIDOT.

Olivine or *Peridot* is the name of another variety of green stone, resembling in appearance the tourmaline, but readily distinguished by its non-electric properties when heated. It belongs to the family of chrysolites, although the chrysolite proper is of a light greenish yellow. The *peridot* is the more beautiful stone, however, and is sometimes found of great size and entirely free from flaws.

These gems come from Brazil and Ceylon, but do not exist in large quantities.

THE SPINEL.

Red spinels are now being largely sold in place of rubies. The latter stones have become so scarce that few choice specimens can be found, and on account of their great rarity bring extravagant prices.

The *spinel ruby* is light in color and shows an admixture of yellow, by means of which it is easily distinguished from the ruby proper. When the red spinel is heated it becomes brown, but if allowed to cool slowly, it changes to green, then passes into an almost colorless state, and finally resumes its pristine color. The fancy colored spinels are blue, green, violet, black, and white, and all the innumerable tints shading from these colors.

It is only quite recently that the lapidary has directed his attention to the cutting of the fancy stones mentioned in this pamphlet, but the encouragement of popular appreciation has been sufficient to warrant the jeweler in urging on these incipient efforts.

THE SEARCH FOR THE BEAUTIFUL.

The desire for personal adornment is ingrained in human nature. The wish to be beautiful and to have the beautiful is a simple and natural desire that has existed in the hearts of mankind longer than history can tell. Children and savages decorate themselves with flowers and feathers, and keep as something valuable bits of colored stones. An Indian's delight in glass beads, and a child's pleasure over a few wild flowers, are natural human instincts. Men may preach dreary homilies against the pomps and vanities of beautiful fabrics, lovely works in gold, and charming displays of color in precious stones; but men and women will continue to admire beauty in every form till the end of time.

Civilized people smile at the paint and feathers of the savage, but it is not at his love of the beautiful, but at his want of culture. The admiration of gems and precious stones is perfectly consistent with the highest culture and refinement. The savage simply admires things of little value or doubtful beauty. Culture im-

plies that the love of the beautiful shall be reasonable. The wish to possess and use objects of beauty and art, far from being a snare and temptation, is perfectly consistent with the highest morality. The love of adornment, which the savage gratifies with beads and paint, the civilized man gratifies with wonderful fabrics, artistic jewelry, and the charming art of the lapidary.

When modern research began to pry into the secrets of dead and forgotten cities, the first spadefuls of volcanic tufa were brilliant with beautiful glass and bits of broken ornaments. There were found rings of gold, necklaces of beautiful stones, and cut gems that were pictures and jewels in one. The oldest mummy cases contain articles of adornment, and when Schliemann dug up old Troas, deep under the mold of centuries, he found ornaments of gold and precious stones. The rudest tools of the old cave dwellers, the arms and oars of the lake dwellers, the oldest things made by hands, show, in a greater or less degree, the same deep-seated instinct in the hearts of men. The desire for personal adornment and the love of the beautiful is thus older than history. Modern civilization seeks not to repress

this instinct, but to cultivate it, to teach what is the best, to show what is really and truly the most beautiful, and to show why one thing is more beautiful than another. Good taste selects the best, shows that art must be joined to nature, and points out the difference between a bit of quartz and a precious stone.

SUPERSTITIONS CONNECTED WITH GEMS.

While gems and precious stones have been sought after for centuries, while they have been worn by every people, it is only in very recent times that they have been rightly regarded. Ascetics have frowned upon them as snares and allurements from pious living. The superstitious have given gems strange attributes that were half poetical, half childish, and wholly imaginary. The fables that have clung to them appear to have started in the East. The natives fancy that rubies ripen, like vegetable matter in the ground, being first yellow and then red. In China, bags of small rubies are placed under the foundations of new houses to bring good luck to the dwelling and its inhabitants. In the early Christian centuries, rubies were said to ward off wicked spirits,

and to keep the one who wore them in a cheerful state of mind. So widely do different generations repeat the same fables. Ignorant peoples always impute to magic, luck, or fate, that which they cannot understand. Pliny relates that on the shore of the island of Cyprus there was a stone lion, having eyes formed of emeralds which shone so brightly that all the fishes were ingloriously frightened away. The fishermen accordingly pulled the emeralds out, and put in glass eyes instead, whereupon the wise fishes became bolder and returned to their accustomed nets. Isidorus, Bishop of Seville, was not much wiser than the fishes, for he said that the emerald was such a beautiful and healthy gem that the lapidaries who cut them always had good eyesight. This is the source of a superstition at present in vogue that wearing an emerald is good for the eyes.

The Bible mentions the twelve stones in the High Priest's breast-plate (see frontispiece), the sard, the topaz, the emerald, the carbuncle, the sapphire, the jasper, the ligure, the agate, the amethyst, the diamond or chrysolite, the onyx, and the beryl. Each stone was engraved with the name of the tribe to which it was

consecrated, and the two onyx stones in the shoulder-knots were also engraved with the names of the twelve tribes of Israel. The Jews, had a tradition, that when, on the day of atonement, the High Priest asked the Almighty forgiveness for the sins of the whole nation, if they were forgiven, the stones in the Urim and Thummim shone most brightly ; if the contrary they became black.

The opal is used in Sir Walter Scott's novel, entitled "Anne of Geierstein," in a manner ridiculously childish. If superstition must be attached to this stone, let it be that of the ancients, who said that it brought every possible good to its possessors. The most simple natural laws are quite sufficient to account for all the magic that is imputed to gems. The belief in the occult properties of precious stones is only a survival of barbaric ignorance ; gems are precious because of their wonderful beauty and rarity. They make charming and acceptable gifts, and chaste and comely ornaments, but it is solely on account of their beauty.



BEAUTY AND VALUE OF PRECIOUS STONES.

The beauty of stones appears to be quite complex. It springs in part from their color, their peculiar power of reflecting and dispersing light, and from the artistic manner in which they are treated on the lapidary's wheel. The commercial value of such stones arises in part from their beauty, and in part from their rarity, and should be governed by their beauty rather than anything else, but this seems to require a more artistic appreciation of gems than has yet been given them.

A precious stone is a mineral that by its beauty of color, its hardness and density, and certain optical properties, is distinguished from the common stones of the field. When we come to examine these properties by the light of science, we find that they have naturally more real and abiding value than any fictitious worth that could be given them by belief in their power to bring good luck or ward off disease or ill fortune.

The extreme hardness of such stones as the diamond, the sapphire, and the spinel enables them to resist the action of moisture, of frost, and oxidation. All other forms

of art-work—sculptures, paintings and buildings—molder and decay in time. Gems have outlasted them all. Jewels have been found that have scarcely lost their lustrous surface after being buried for thousands of years.

It is of great interest to observe the peculiar optical qualities and colors of gems, for these give them their beauty and make the chief measure of their value. Precious stones have been supposed to give out light. This is not true, except in the case of phosphorescent light, and this is so feeble that it is of no value. All diamonds are black in the dark, but in the light of the sun or a lamp they appear to shine as if giving light themselves. Rays of light and flames of fire have been said, by highly imaginative persons, to flash from brilliant gems, but such people have been simply misled by their own senses. Reflection and dispersion of light are quite sufficient to explain, on a simple scientific basis, the charming display of light and colors of the diamond and the flashing rays of other cut gems. Besides these properties nearly all precious stones have the power of refracting light, while a few exhibit two colors, one by reflected and another by transmitted light.

Closely allied to refraction is the dispersion of light. If a ray of sunlight passes through any transparent body that is cut into the form of a prism, the ray is split into the solar spectrum, and shows all the colors of the rainbow. If any clear stone is properly cut, as in the brilliant or rose form of cutting, the gem will make quite a number of prisms joined together. Each side of the gem will be one face of a prism, and the light passing through it will be dispersed into all the different colors of the rainbow. As some of the prisms will be more or less imperfect, only parts of the spectra will be seen, and the same colorless stone will flash out rays of red, blue, and other colored lights. It is this dispersion that gives all the wonderful play of color to gems.

There is an impression in this country that the clear white diamond is the most beautiful of all precious stones. It is certainly very valuable, but it is not by any means the most beautiful in color.

It seems strange that people have been content with a colorless stone, while beautiful gems that have colors of wonderful richness and purity have been comparatively neglected. By the use of color the work

of the jeweler is raised to a fine art. He selects from the apparently endless varieties certain precious stones, precisely as the painter selects his colors, and combining them judiciously, produces a work of art. If he uses diamonds it is as a foil to set off the colors, just as the florist in making an artistic bunch of flowers uses white roses among his carnations and violets to enhance their beauty.

It has been the aim, in this brief monograph, to show what constitutes a real gem, to point out the varieties and colors of such stones, and to show their value in art. It is only in modern civilization that gems have been rightly understood and appreciated, though they have been worn by the peoples of every time. Some of the most beautiful stones have been made the subject of false estimates and strange superstitions, and it is the endeavor here to show that beauty alone should decide the merit of precious stones.



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